

Microcontroller based Signal Converter / Isolator Module with Universal Input (Model: TSC-05)



Model Wise Description:

Model	Product Description	Size w x h x d (mm.)
TSC-05	Microcontroller based Signal Converter / Isolator Module	70 x 75 x 110

Description:

Libratherm offers microcontroller based Signal Converter cum Isolator (Model: TSC-05) in 35 mm. DIN Rail compatible modules. This model accepts user selectable universal input from Thermocouple, RTDs, DC Volt, DC current and Resistance signal and provides single or dual optically isolated output in the form of (4-20)mA or (0-5)V or (0-10)V, which is proportional and linearized to the input signal. The input signal is processed by 16 bit ADC and the same is indicated on 5 digit LED display. The display also allows user to select the input type and configure the output type. LED indications on the front - shows the status of selected input type and output type.

The input and output signals have their grounds optically isolated. Thus the process signals received from the Transducers or transmitters or Sensors can be directly connected through TSC-05 to the PLC, DCS or to any other electronics in the process industry accepting such signals, without any signal loss or ground line interference. Front panel keyboard is provided for Input type selection and calibration. TSC-05 operates on 24VDC supply.

Features:

- ❖ Accepts universal DC signal inputs and provides single or dual optically isolated, Proportional and linearized analogue output.
- ❖ Local LED display
- ❖ On site calibration facility-using front panel key board.
- ❖ Operates on 24VDC.
- ❖ DIN rail mounting.

Technical Specifications:

Input	Thermocouple types J,K,T,E,R,S and RTD (Pt-100) and 4-20mA
Display	5 digit 0.3" red 7 segment LED display
Range	Display range is subject to the selected input.
Accuracy	For thermocouple and RTD inputs the software linearization is done for +/-1 or +/-0.1oC indicating accuracy. For other input the accuracy is absolute to the input.
Output	(4-20) mA, (0-5) VDC, (0-10) VDC proportional to the specified input range. For current output, RL (max.) = 500 Ohms. For voltage output, RL (min) = 100K Ohms.
No. Of Outputs	Maximum 2 parallel independent outputs can be provided for single input. Each output can be of same or different type.
Response Time	Less than 50 mS.
Cold junction Compensation	Automatic for Thermocouple Input using separate IC sensor.
Calibration	On site calibration facility through front panel keyboard.
Open sensor indication	Up scale or Down scale – user programmable.
Isolation	Input and Output are optically isolated for DC inputs . Three port isolation - ,Power supply to Input, Power Supply to Output and Input to Output
Isolation Voltage	Greater than 2KV AC/DC.
Serial Interface	RS485 – MODBUS RTU (Optional)
Mounting	35-mm. DIN rail mounting ABS enclosure.
Supply	DC Supply : 24VDC +/- 10%. @ max. 150mA
Operating/Storage Temperature	0 to 50 oC Max. / 0 to 70 oC @ 10 to 85% RH (Non condensing)
Size	70 x 75 x 110 mm. (IP65 ABS plastic enclosure - DIN rail mountable)